

REMARKS

In the Office Action mailed on October 8, 2010, claims 1-3, 5-10, 12, 14-21, and 25-33 were rejected.

Interview

The undersigned Applicants' Representative appreciates the time spent by the Examiner in the telephonic Interview held on February 2, 2011. In the Interview, the teachings of the cited references were discussed in regards to the pending claims, with Applicants' Representative arguing that the claims were in condition for allowance. No agreement was reached on the allowability of the pending claims.

Claim Amendments

In order to expedite prosecution, independent claims 1 and 27 have each been amended to incorporate the features of dependant claim 11.¹ Accordingly, dependant claim 11 has been cancelled.

Claim 12 has been amended to depend from claim 1.

Claims 14 and 15 stand objected to for depending from cancelled claim 13. Accordingly, claims 14 and 15 have been amended to depend from claim 1.

Background

The quality of certain packaged products such as, for example, orange juice can degrade due to the presence of unsuitable amounts of oxygen in the packaged product. As such, it can be desirable in certain situations to package such products in containers having the ability to suitably scavenge oxygen, thereby extending the shelf-life of the packaged product. As discussed in the background of U.S. 5,759,653 ("Collette"), plastic containers formed using conventional methods and including

¹ Applicants traverse the rejection of claim 1, prior to the instant amendment, and reserve the right to file a continuing application to pursue the subject matter of claim 1 prior to entry of the instant amendment.

polyamide scavenging materials (e.g., MXD-6 nylon) in combination with an oxidative catalyst typically require a costly aging process in which the unfilled containers are stored empty for an extended time period to activate the oxygen scavenging properties of the unfilled container.² Once activated, the unfilled containers must either be filled before the oxygen scavenging properties of the container are depleted or stored, for example, under nitrogen gas to prevent such depletion prior to filling. To address the costly aging process, Collette teaches a method and combination of materials that result in the accelerated activation³ of the oxygen-scavenging layer before filling. Because the Collette oxygen scavenging layer is already activated before filling, Collette teaches that steps must be taken to avoid depletion of the activated scavenging layer prior to use.⁴

Unlike Collette, the present invention provides a method for making a plastic container in which the resulting unfilled container is storage stable (e.g., can be stored under ambient conditions) and the oxygen-scavenging properties of the container are activated after the container is filled with product. None of the cited references disclose such a plastic container.

35 U.S.C. 103(a) Rejections

Claims 1-3, 5-12, 14-21, and 25-33 stand rejected as being obvious over Collette (US 5,759,653) in view of Venkateshwaran (US 5,744,056).

1. Independent Claim 1

Independent claim 1 recites a method for making a container that is stable during unfilled storage and has a barrier layer with an oxygen scavenging property that is activated after filling the container with an aqueous fluid. In contrast, Collette teaches a multilayer container made from an oxygen scavenging material that is

² See Collette at column 2, lines 10-42.

³ See, e.g., the Collette Abstract and the first paragraph of the Collette Summary.

⁴ For example, Collette teaches storing the activated container preform under a modified environment such as nitrogen (col. 7, lines 17-28) and/or shielding the activated oxygen scavenging layer between layers of ethylene vinyl alcohol ("EVOH") or MXD-6 nylon (e.g., col. 8 line 45 – col. 9, line 9).

activated before filling the container with product.⁵ Collette does not include any disclosure of a method for forming a container having an oxygen scavenging layer that is not already activated prior to product filling.⁶ Rather, as discussed above, Collette explicitly seeks accelerated activation of the oxygen scavenging layer before filling the Collette container with product to reduce the storage costs associated with “aging.”

The Office Action at the bottom of page 2 acknowledges that “Collette does not show activation of the oxygen scavenging by filling.” Nonetheless, the Office Action asserts that in view of Venkateshwaran “[i]t would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use Venkateshwaran’s activation step in place of Collette’s activation step in order to avoid taking special steps to maintain low moisture levels to preserve the package . . . and because selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results”⁷

Even *arguendo* if a skilled artisan were motivated to consider the Collette reference in view of Venkateshwaran, the instantly claimed invention would not be achieved.

First, the Collette oxygen scavenging composition is inherently activated during production prior to product filling and Collette does not teach any method for forming a container that is not already activated prior to filling. The central teaching of Collette is the use of post-consumer PET (i.e., recycled PET) to achieve “accelerated activation” of the Collette container before filling to avoid the costly

⁵ That the Collette scavenger layer is already activated prior to product filling has been discussed extensively by Applicants on the record. See, e.g., Appendix “A” of Applicants’ Response dated November 17, 2008, which lists passages of Collette that demonstrate that the Collette scavenger layer is activated prior to product filling.

⁶ Further support of Applicants’ position is found in the Declaration of inventor Paul Share dated October 20, 2009, which was previously submitted.

⁷ Contrary to the assertions of the Office Action, the selection of any ordering of process steps is not *prima facie* obvious. The September 1, 2010 Obviousness Guidelines explicitly state that “[w]hen considering obviousness, Office personnel are cautioned against treating any line of reasoning as a *per se* rule . . . Simply stating the principle (e.g., “art recognized equivalent,” “structural similarity”) without an explanation of its applicability to the facts of the case at hand is generally not sufficient to establish a *prima facie* case of obviousness. See Federal Register, Vol. 75, No. 169, September 1, 2010 Notices at p. 53645.

aging processes discussed in the Collette background section.⁸ As such, Collette **teaches against** activation after filling. Moreover, Venkateshwaran provides no relevant teachings as to how activation of an oxygen scavenging composition such as that of Collette could be avoided until product filling. The Venkateshwaran oxygen-scavenging chemistry is completely different from that of Collette, utilizing dissimilar processes and materials.⁹ That certain packaging articles including the Venkateshwaran oxygen scavenging composition remain substantially inactive prior to use is immaterial. The Office Action provides no explanation as to how a skilled artisan would have modified the Collette process and/or materials, to avoid the inherent activation of the Collette oxygen scavenging layer prior to filling, let alone why a skilled artisan would have been so motivated in view of Collette's central teaching of accelerated activation prior to filling.

Second, contrary to assertions of the Office Action, Collette does not teach the use of a preblend (referred to as a "masterbatch" in Collette) that includes 20-2,000 ppm of an oxygen scavenging material. The Office Action erroneously points to the passage appearing at col. 10, lines 23-37 of Collette as disclosing such a concentration in the Collette masterbatch. Based on the teachings of the Collette reference as a whole, it is clear that the cited passage refers to the amount of catalyst in the Collette first blend, which is formed by combining the Collette masterbatch with a PET component including post-consumer PET and includes only 1-10% of the masterbatch.¹⁰ 3,000 – 6,500 ppm is the only masterbatch catalyst concentration

⁸ See, e.g., column 2, lines 10-42 and Figure 1.

⁹ The Collette scavenging layer includes an MXD-6 polyamide oxygen-scavenging polymer in combination with a catalyst. The Venkateshwaran scavenging composition, however, includes an oxidizable metal component (preferably iron) in combination with an electrolyte component (preferably sodium chloride) and a solid, non-electrolytic, acidifying component (preferably sodium acid pyrophosphate). See, e.g., the Summary at Col. 3, lines 25-35. While Venkateshwaran generically discloses a "polyamide" as one of a laundry list of structural polymers that may be combined with the Venkateshwaran scavenging composition, Venkateshwaran does not teach use of an oxygen-scavenging polyamide material.

¹⁰ See the fourth paragraph of the Collette Summary.

expressly taught by Collette.¹¹ It would be entirely inconsistent for Collette's only disclosed masterbatch concentration of 3,000 – 6,500 ppm to be outside of the preferred catalyst concentration of 50-1,000 ppm appearing in the cited passage at col. 10, lines 35-36, let alone outside by such a large margin. The preferred catalyst range of 50-1,000 ppm, however, is entirely consistent with the first blend catalyst concentration of 250-500 ppm disclosed throughout Collette.¹²

Thus, it is respectfully submitted that claims 1-3, 5-12, 14-21, and 25-26 are in condition for allowance.

2. Independent Claim 27

Independent claim 27 stands rejected as being obvious over Collette in view of Venkateshwaran. It is respectfully submitted that independent claim 27 is allowable for the same reasons as discussed above with regards to independent claim 1. In particular, Collette teaches a method for forming a container having a scavenging layer that is inherently activated during production before filling. Neither reference teaches any method for forming a container such as that of Collette that is not already activated prior to filling. It is therefore respectfully submitted that independent claim 27 and dependent claim 28 are in condition for allowance.

3. Independent Claim 31

The Office Action did not specifically address independent claim 31 and associated dependant claims 32 and 33. Clarification of the basis for rejecting these claims is respectfully requested. As already discussed at length on the record, Collette explicitly teaches that a multilayer design should be employed to protect the packaged products from contacting contaminants present in the core Collette scavenging layer. As such, Collette teaches against monolayer construction. Accordingly, it is respectfully submitted that claims 31-33 are in condition for allowance.

¹¹ See the fourth paragraph of the Collette Summary and claim 26.

¹² See the fourth paragraph of the Collette Summary; col. 9, lines 64-65; and claim 27.

CONCLUSION

In view of the foregoing, all of pending claims 1-3, 5-10, 12, 14-21, and 25-33 are in condition for allowance. Reconsideration and prompt allowance of all pending claims is respectfully requested. The Commissioner is authorized to charge any additional fees associated with this paper or credit any overpayment to Deposit Account No. 50-2070.

Respectfully submitted,

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